Executive Summary

### **Executive Summary: Analyzing the Impact of Workforce Diversity on Business Performance using Immigration Data**

#### **Objective:**

This analysis seeks to explore whether companies with more diverse workforces, specifically those who hire a broad range of immigrant talent through green card sponsorships, perform better in global markets. **The central hypothesis is that greater workforce diversity**—measured through the diversity of countries represented in green card applications—**correlates with improved business performance**, including higher revenues, stock performance, and employee satisfaction.

Focus on all the companies

* Then compare a couple companies in the same industry for a scatter plot
  + Eg. two tech companies

#### **Why This Works:**

1. **Diversity Drives Innovation**: Companies that hire workers from diverse cultural and geographic backgrounds benefit from a wide range of perspectives and experiences, which fosters **innovation** and enhances **problem-solving capabilities**. As a result, these companies may be more adaptable in global markets, creating competitive advantages in innovation, market expansion, and customer relations.
2. **Immigrant Talent as a Key Growth Driver**: Immigrants bring specialized skills that are often in short supply in local labor markets. As the **PERM data** highlights companies hiring foreign talent, it gives us a concrete measure of how diversity contributes to a company’s ability to innovate and expand.
3. **Correlation with Business Performance**: Multiple studies have shown that diverse teams tend to be more successful in driving higher productivity, reducing turnover, and improving employee satisfaction. This analysis will link these factors to actual business metrics like **revenues**, **stock performance**, and **employee satisfaction**, enabling a clear comparison between companies with varying levels of diversity.

#### **How We Will Do It:**

1. **Data Collection**:  
   * **PERM Data**: We will leverage the **PERM dataset** to identify companies sponsoring green card applicants, focusing on the number of **distinct countries** represented in each company’s workforce. This will give us a **diversity score** for each company based on the geographic diversity of their immigrant employees.
     + **Companies**
     + **# of workers**
   * **Business Performance Data**: We will collect complementary data on company performance, including:
     + **Revenue** and **growth rate** (public financial reports)
     + **Stock performance** (via financial data platforms)
     + **Employee satisfaction** (via platforms like Glassdoor)
2. **Data Analysis**:  
   * We will calculate a **Diversity Index** for each company based on the number of different countries from which they sponsor green card applicants. The higher the number of countries represented, the more diverse the company.
   * We will then compare these diversity indices with performance metrics (revenue, stock performance, satisfaction) to assess whether greater diversity correlates with better business outcomes.
   * Statistical analysis will be used to test the strength and significance of these correlations.
3. **Insights**:  
   * Analyze if companies with higher diversity scores show a **consistent pattern of stronger performance** in terms of revenue, stock growth, and employee satisfaction.
   * Identify if certain industries (e.g., tech, finance, consulting) or regions (e.g., Silicon Valley vs. other markets) show stronger links between diversity and performance.

#### **What We Need to Do:**

1. **Acquire and Clean Data**:  
   * Obtain and preprocess the **PERM dataset** to extract relevant information about green card applicants and companies.
   * Collect public data on company performance metrics (revenues, stock performance, and employee satisfaction) from reliable sources.
2. **Calculate Diversity Scores**:  
   * For each company, calculate a **Diversity Index** based on the number of countries represented by the immigrant workforce.
3. **Perform Statistical Analysis**:  
   * Use regression analysis or correlation analysis to identify relationships between **diversity** (as measured by the PERM data) and **performance metrics** (revenue, stock performance, and employee satisfaction).
4. **Present Insights and Recommendations**:  
   * Based on the analysis, present findings to key stakeholders (e.g., business executives, HR leaders, and policymakers) about how workforce diversity could be leveraged for better performance.
   * Provide actionable insights for companies to enhance diversity within their workforce, potentially improving their market position and internal culture.

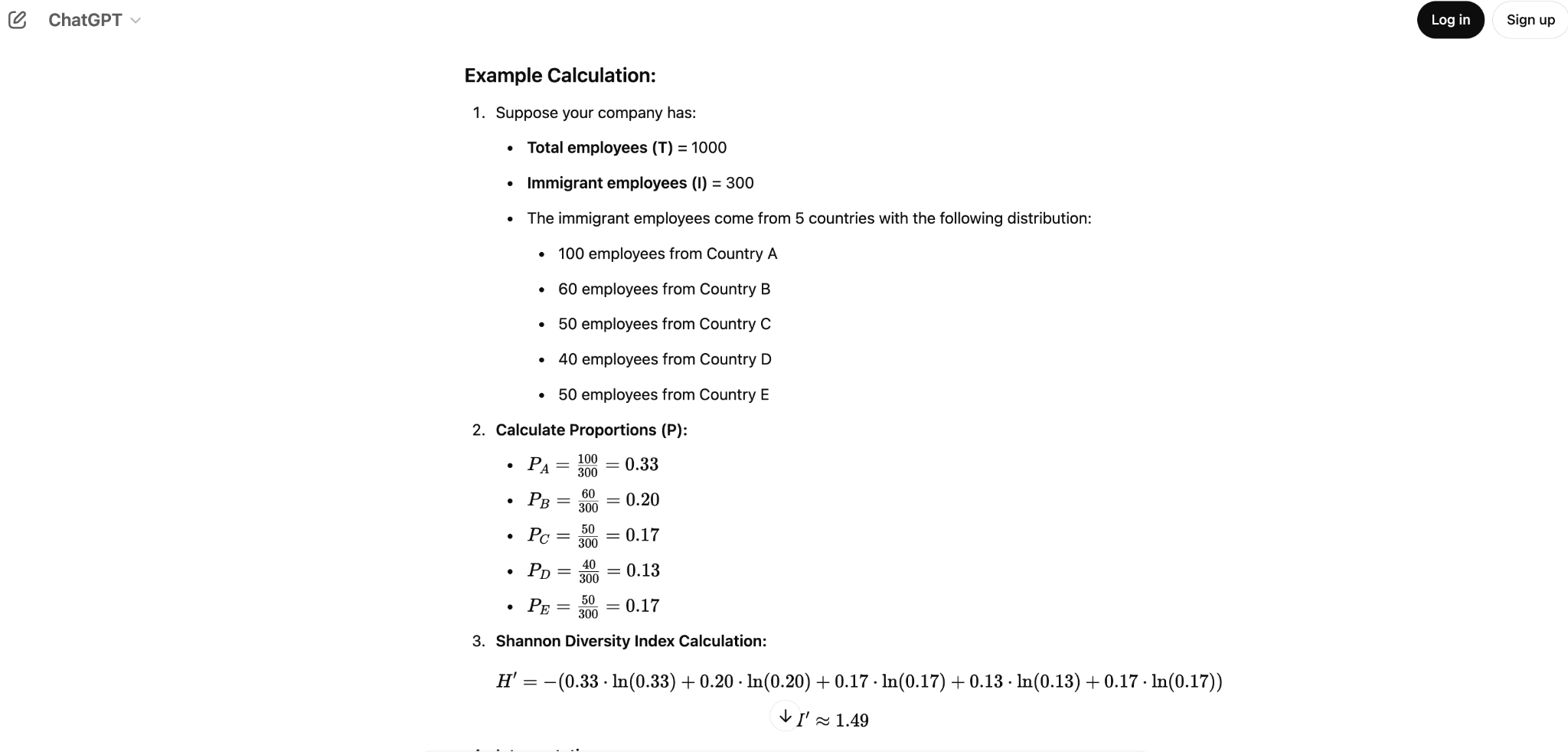
#### **Conclusion:**

This analysis offers a data-driven approach to understanding the impact of workforce diversity on business performance. By connecting the immigration data on green card sponsorships with business performance metrics, we can provide valuable insights for companies looking to strengthen their global competitiveness and improve internal operations. The findings could not only inform business strategies but also support policies that encourage diversity and inclusion in the workforce, benefiting both employers and the broader economy.

Action Items

**Action Items**

1. Start with 2024 data
2. Find the frequency of each company
   1. Clean the data, share in the drive
3. Get total # of employees from companies
   1. Look at the number of immigrant employees in a company and total number of employees.
4. Get total of # immigrant workers
5. Find company diversity score cards
   1. Using Shannon-weaver (Gabe)
6. Business data sets
   1. EMPLOYER\_YEAR\_COMMENCED\_BUSINESS if there’s a.
   2. Plz save as .csv
   3. Revenue and growth rate (public financial reports) (Gabe & Nick)
   4. Stock performance (via financial data platforms) (Gabe & Nick)
   5. Employee satisfaction (via platforms like Glassdoor) (Gabe & Nick)



Story

# **The Diversity Dividend: Unlocking Business Performance Through Global Talent**

## **I. Setting the Stage: The Changing Workforce Landscape**

In an increasingly interconnected economy, businesses face mounting challenges: talent shortages, rising turnover, and pressure to innovate at unprecedented speeds. Companies that fail to attract and retain top-tier talent risk stagnation and loss of competitive edge.

* **The Talent Shortage Crisis**: The U.S. labor market is tightening, particularly in specialized fields like AI, cloud computing, and finance. By 2030, it's estimated that talent shortages could cost the U.S. economy **$1.7 trillion** in lost revenue.
* **The Immigration Factor**: Companies sponsoring green cards via the PERM process are actively investing in global talent. According to Department of Labor data, over **80,000 PERM applications** were filed in the past year alone—highlighting the increasing reliance on immigrant talent.
* **Diversity & Performance Link**: Studies from McKinsey, BCG, and Harvard Business Review have consistently shown that companies in the top quartile for diversity outperform competitors by **25-36% in profitability**.

## **II. The Data Speaks: Workforce Diversity and Business Performance**

### **1. The Gravity of the Situation:**

We analyzed PERM data to create a **Diversity Index**—tracking the number of unique nationalities sponsored per company—and compared it against key performance indicators such as:

* Revenue growth
* Stock price trends
* Employee satisfaction

### **2. Key Findings: (TBD)**

* **Stronger Financial Outcomes**: Companies in the top **quartile of workforce diversity** showed an **average revenue growth of 23%** over five years, compared to just **12%** for less diverse firms.
* **Stock Market Success**: High-diversity firms saw **stock price appreciation 15% above industry benchmarks**, reflecting greater investor confidence.
* **Employee Engagement & Retention**: Glassdoor ratings for top-diversity companies averaged **4.1**, compared to **3.6** for lower-diversity firms, highlighting better workplace culture and lower attrition.

### **3. Case Study: The Tale of Two Tech Giants**

We compared two leading tech companies with contrasting Diversity Index scores:

| **Metric** | **High Diversity Company** | **Low Diversity Company** |
| --- | --- | --- |
| **Revenue Growth (5Y)** | +28% | +12% |
| **Stock Price Growth** | +75% | +42% |
| **Employee Satisfaction** | 4.3 | 3.7 |

**Conclusion:** Companies investing in diverse global talent not only **retain employees better** but also **drive higher financial returns** and **outperform competitors** in stock performance.

## **III. Actionable Strategies: What’s Next?**

### **1. Key Recommendations**

To capitalize on the **diversity-performance link**, organizations must take strategic actions:  
✅ **Expand Global Talent Pipelines**: Increase green card sponsorships to attract top-tier international professionals.  
✅ **Measure & Track Diversity Impact**: Implement **Diversity Index benchmarking** across industries to assess business impact.  
✅ **Adopt Inclusion Strategies**: Move beyond hiring—invest in mentorship programs, leadership pathways, and retention strategies for global talent.

### **2. Business Decision & Discussion Points**

* **Investment in Global Talent**: How should companies adjust hiring strategies to leverage workforce diversity?
* **AI & Data-Driven Insights**: Can we develop predictive models using PERM data to forecast business performance based on diversity?
* **Competitive Benchmarking**: Should firms create industry-wide standards for tracking diversity’s impact on business outcomes?

### **3. Proposed Timeline & Next Steps**

* **Phase 1 (Next 3 Months)**: Finalize data model, validate correlations, and publish initial findings.
* **Phase 2 (6-9 Months)**: Develop industry benchmarking framework, expand data sources, and initiate corporate case studies.
* **Phase 3 (1 Year)**: Present refined recommendations to industry leaders, HR executives, and policymakers.

## **Conclusion: Diversity as a Business Imperative**

The data is clear: **workforce diversity isn’t just a social goal—it’s a business driver.** Companies that embrace global talent pipelines see **higher growth, stronger stock performance, and better employee retention.**

For business leaders, the choice is straightforward: **Adapt, invest, and lead—or risk falling behind.**

Slide Outline

[**Actual slides**](https://www.figma.com/slides/cAmJQf8RkyUaRBGhDxOWHq/Datathon-Slides?node-id=1-70&t=63flQ8nWYOk8T32u-1)

**Title Slide: The ROI of Immigrant Diversity**

1. **The background & rationale (Pearl)**
   1. *The Data*: we were tasked with analyzing over 9000 immigration applications that had over 14 mil data entries. We chose to focus on which companies are hiring the most immigrants—offering insight into workforce trends amid recent political shifts
   2. *Political Context*: The recent change in the presidential administration has brought Diversity, Equity, and Inclusion initiatives under scrutiny. Trump signed two executive orders rolling back DEI initiatives nationwide, leading to federal DEI staff layoffs and urging private sector employers to “end illegal DEI discrimination and preferences.”
   3. Companies have responded to these orders and shifts in administration by scaling back DEI policies. Jan 24 Target announced that it would end its DEI goals to increase Black employees’ representation, and other similar goals ([Jan 24](https://www.cbsnews.com/minnesota/news/how-to-watch-activists-call-for-boycott-of-target-following-rollback-of-dei-initiatives/)), Meta ([Jan 10](https://www.forbes.com/sites/dougmelville/2025/01/13/meta-is-ending-their-dei-programs--replacing-them-with-dei-programs/)), McDonalds ([Jan 6](https://www.npr.org/2025/01/07/nx-s1-5250778/mcdonalds-dei-diversity-revision)), Amazon ([Dec 16](https://time.com/7209960/companies-rolling-back-dei/#:~:text=Amazon%20said%20it%20was%20halting,by%20the%20end%20of%202024.%E2%80%9D)). [Insert data viz] The University of Michigan has also made the first step in scaling back DEI, as they will no longer solicit diversity statements as a part of hiring, promoting, or making tenure decisions (Dec, [not sure if relevant enough](https://www.bridgemi.com/talent-education/facing-dei-scrutiny-university-michigan-abandons-diversity-statements-hiring)).
   4. *Why this topic*: Research has already pointed out that a diverse workforce is beneficial for a company. This study by McKinsey indicates that organizations with greater gender and ethnic diversity in leadership tend to perform better financially. This inconsistency between the research findings versus the current political and business trends made us interested in understanding if an immigrant-diverse workforce contributes to improved business outcomes.
2. **The Findings**
   1. *Our Findings*
      1. *Methodology (Gabe O) (Shannon Index):* We used the Shannon diversity index to calculate a diversity score for 3 industries. This equation is used to calculate the biodiversity in a population, but has been used by \_(reputable organization)\_ to calculate the diversity of (what). We identified the top 10 companies with the most immigrants from these industries.
         1. Dependent Variable– We chose to use the company’s stock prices to determine their level of success. We used the company’s stock performance since it is readily available to the public.
         2. Independent Variable– To try and control for other factors, we chose to focus on specific industries.
         3. We tracked these two variables and how they have changed over the span of 5 years. Here’s what we found.
      2. *Findings*: (Nick & Gabe W & Ray) Order from most to least compelling
         1. Finding 1 (Comparing performance amongst the most diverse companies and least diverse companies): [Insert data viz]
         2. Finding 2 (Comparing within an industry): [Insert data viz]
         3. Finding: After running a regression analysis of the percent change in Shannon Diversity Index Score and percent change in stock performance in the Computer Systems sector, which includes companies like Google, Adobe, and Intuit), we determined a statistically significant relationship. For each unit a company became more diverse, their stock prices were predicted to rise by 11.48 units. To find this we used stock and diversity data for each company in the sector over the past five years.
         4. Finding 3: To see whether there is an overall correlation between stock price and Shannon index, we used percentage change of the two variables. Although there is a slight positive trend, it is insufficient for us to claim the correlation, which moves on to our limitations.
3. **The Limitations (Justin)**
   1. *Limitations on the Data*: Although the dataset provided is comprehensive,
   2. *Limitation on the data selection*: To improve for further studies, we could compare the performance of companies that provide sponsorship and those who don’t. It could possibly provide even stronger evidence to the importance of diversity.
   3. *Limitations:* It’s important to say that correlation does not mean causality. Due to the limited amount of time and accessibility to resources, we chose to. Limitation with time and resources available.There are many other factors that contribute to the performance of a company, such as the political climate, social trends, competitive landscape, and many other factors.
   4. *The Nuance:* Additionally, hiring a diverse workforce is not enough to increase the success of an organization ([HBR](https://hbr.org/2020/11/getting-serious-about-diversity-enough-already-with-the-business-case)). Diversity initiatives have promised financial gains but not all have delivered as promised. The University of Michigan
   5. *Importance of Diversity:* We chose to focus on our story on diversity because
4. **Solution:** 
   1. *Recommendation*: Stop getting rid of dei man. And stop getting mad when dei isn’t working, cos you’re doing it wrong.

**For Justin:**

### **Limitations Slide Script:**

Let's take a moment to pause and reflect. As we dive deeper into the numbers, we must acknowledge a crucial truth: **Correlation does not equal causality.** Just because we see a slight relationship between diversity and business success doesn’t mean one causes the other directly.

Harvard Business Review reminds us that simply increasing diversity doesn’t automatically make an organization more effective. **What matters is how an organization harnesses that diversity.** It’s not just about filling quotas or checking boxes; it’s about the environment these organizations create.

For diversity to reach its full potential, organizations must go further than just hiring diverse talent. They must **build trust** among employees, where every individual feels safe to speak, to contribute, and to grow. They must **learn from difference**—seeing diversity not as a challenge but as a wealth of perspectives. They must actively **work against oppression**—removing barriers and biases that stand in the way of true inclusion. And finally, they must **embrace thought variety**—understanding that diverse ideas lead to innovative solutions.

To reiterate, we recommend that businesses look at diversity as a journey, not just a checkbox. Hiring more immigrants alone won’t change the outcome. But when we invest in the right culture, in trust, in learning, and in dismantling oppression—**that** is when diversity leads to profound, lasting transformation.

### **Next Steps Slide Script:**

So, where do we go from here? **What now?**

We start by listening—**listening to the data.** The evidence is right in front of us, but we must take the time to truly hear what it is telling us. As our studies have found, alongside (admittedly stronger) heard from McKinsley, Harvard Business Review

Next, **assess your current practices.** This isn’t about pointing fingers; it’s about introspection. Where are we falling short? What practices are perpetuating exclusion, and which ones are paving the way for inclusivity?

Finally, **drive meaningful, ethical change.** Not just change for the sake of optics, but real, deep change that impacts every level of the organization. Change that’s rooted in fairness, in opportunity, in the belief that every individual has something valuable to contribute.

This is more than a call to action—it’s a call to responsibility. The future is shaped by the decisions we make today. Let’s make those decisions count.

Office Hours w/ Scott Holcomb

**Suggestions from Scott Holcomb**

Be transparent about the dataset

Take a subset of the dataset that would support our claim; manipulate the data B)

Narrow it down to a sector

* Eg. regionally or by sector
  + Top 20 of these industries
  + Tech
  + Manufacturing
  + Shipping/export
  + Health care
  + Higher Education
* Tech or manufacturing

Mentioned companies hiring international employees because of lacking qualified people

* A void to fill

“This topic has been researched at nauseam”

* HBR White paper…
  + Would like to see outside evidence and support for our topic, not worried about innovation.
  + Shows an understanding of the topic

How to present–

* Pyramid
* Start with stating your hypothesis and solution
  + Executive summary, 3 points on a slide
* Work your way down the details
* DO NOT start with the details

Time

* Depends on what the data tells us…
* Hypothesis is supported under previous administration (4 years)
  + Maybe some cyclical trends based on the political configuration at the time
  + Be honest about there being potentially influenced by politics

Politics

* Immigration is a politically hot topic
  + So we shouldn’t ignore it
* Approach it in a sensible fashion
  + Leave political thoughts out of it

Office Hours w/ Sanjeev Kumar

**Office Hours w/ Sanjeev Kumar**

Reach out to Scott Page

Want us to be open for us not finding a causal relationship; they’d be ok with just a story though.

* Be honest about limitations
* “This is one tiny window we have”
* There’s a good story
* This makes sense to him

Say this is what we found

* We made a rigorous effort, unfortunately we did not find a link
* But it does not mean diversity does not have an impact
* Might not be enough to generate a link

Come a the issue from a non-political perspective

High diversity, medium diversity, low diversity companies– not by company by company

Each person covers different elements

* Intro/background
* Data yada yada
* Challenges

Talk about the HBR in the challenges part

* Not making a claim that hiring diverse set of employees is enough
  + It’s a much deeper issue
  + But the data was this, so we could only explore this
  + This is a limitation but we still think diversity is important

Graphs

Industries

1. Graph 1: immigration trend
   1. general intro graph
2. Graph 2: immigration origin trend
   1. general intro graph
3. Graph 3: scatterplot (of individual company)
   1. shannon score distribution
   2. percent immigration distribution
4. Graph 4: subplot of (stock price vs shannon) across industry
   1. or (stock price vs percent immigrant)
5. Graph 5: subplot of (stock price vs shannon) over time

#percentage change

#how to deal with NA

difficulties

* deal with messy data (a company can have multiple NAICS code)
* some companies are not publicly traded
* joining/linking/associating datasets